

In re Application of: Britta HARDY et al.
Serial No.: 10/577,679
Filed: April 28, 2006
Office Action Mailing Date: July 12, 2007

Examiner: NIEBAUER, Ronald T.
Group Art Unit: 1654
Attorney Docket: 31831

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 36-69 are in this Application. Claims 41-43, 45, 47-52, 55, 57, 59, 61, 63-69 have been withdrawn from consideration. Claims 36-40, 56 and 60 have been rejected under 35 U.S.C. § 101. Claims 36-40, 44, 46, 53-54, 56, 58, 60 and 62 have been rejected under 35 U.S.C. § 102. Claims 37, 40, 53, 56 and 60 have been rejected under 35 U.S.C. § 112. Withdrawn claims 41-43, 45, 47-52, 55, 57, 59, 61, 63-69 have been cancelled herewith. Claims 39, 40 and 54 have been canceled herewith. Claims 36, 37, 38, 44, 46, 53, 56, 58 and 60 have been amended herewith. New claim 70 has been added herewith.

Amendments To The Claims

35 U.S.C. § 112 Rejections

The Examiner has rejected claims 37, 40, 53, 56 and 60 under 35 U.S.C. 112, second paragraph, as being indefinite and failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner states that it is not clear if claim 37 is drawn to a peptide consisting of the recited sequence, a peptide comprising the recited sequence or a peptide comprising any portion of the recited sequence. The Examiner states that claim 37 is drawn to a peptide of a particular sequence but since claim 40 recites that the peptide is no more than 50 amino acids claim 37 must be open to more than consisting of the recited sequence. The Examiner's rejections are respectfully traversed.

Claim 37 has been amended herewith so as to render explicit what was already implicit *i.e.*, that the peptide consists of SEQ ID NO:6 or 10. Claim 40 has been

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cancelled herewith. By virtue of dependency Applicants believe that rejections pertaining to claims 53, 56 and 60 are overcome by the amendment to claim 37.

Thus, in view of the above claim amendment Applicants believe to have overcome the 35 U.S.C. § 112, second paragraph rejections.

35 U.S.C. § 101 Rejections

The Examiner has rejected claims 36-40, 56 and 60 under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, the Examiner states that for claims 36, 38 and dependent claims the claims language is such that any portion of the recited sequence reads on the claims, and that any naturally occurring protein which comprises, for example the Tyr-Pro, reads on the claimed invention. For claim 37 and dependent claims the claim scope is unclear so the claim has also been interpreted broadly to include any portion of the recited sequences. Further, the specification (Page 14, line 18) notes that the term peptide encompasses native peptides, hence it is possible that the peptide is naturally occurring and has not been isolated or removed from a naturally occurring environment. Therefore, the claimed subject matter reads on a product of nature. The Examiner's rejections are respectfully traversed.

In order to expedite prosecution in this case, Applicants have elected to limit claims 36, 37, 38, 56 and 60 to isolated peptides, to thereby distinguish the claimed peptides from naturally occurring peptides. Support for "isolated peptides" can be found on Page 55, line 5 of the instant application as filed.

In addition, claims 39 and 40 have been cancelled herewith, thereby rendering moot the Examiner's rejections with respect to these claims.

In view of the above claim amendments Applicants believe to have overcome the 35 U.S.C. § 101 rejections.

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35 U.S.C. § 102 Rejections

The Examiner has rejected claims 36-40, 46, 53-54, 56, 58, 60 and 62 under 35 U.S.C. 102(a) and 102(e) as being anticipated by Blaschuck et al. (US 6,638,911). Specifically, the Examiner states that claims 36, 38 and dependent claims recite a peptide comprising an amino acid sequence selected from a particular group, however, due to the claim language, the claim encompasses peptide that comprise the full length of SEQ ID NO:10 or 6, or any portion of SEQ ID NO:10 or 6. In addition, the Examiner states that claim 37 recites a peptide of a certain SEQ ID but does not specify if the peptide comprises, includes or consists of the particular SEQ ID nor does the specification, and that Blaschuck teach a peptide comprising the sequence HIDS (SEQ ID NO:405, claim 10) which is a peptide of a portion of SEQ ID NO:10 of the current invention. This peptide is less than 50 amino acids in length, can be cyclic, can be used in a pharmaceutical composition and linked to a drug. The Examiner's rejections are respectfully traversed. Claims 36, 37 and 46 have been amended herewith. Claims 39, 40, 54 have been cancelled herewith.

As correctly pointed out by the Examiner, the peptide described by Balschuk is entirely different from the claimed peptides. To render this difference more explicit Applicants have chosen to amend claims 36, 37 and 46 such that it is clear that the claimed peptides comprise an amino acid sequence which consists of all the amino acid sequence of SEQ ID NO: 6 or 10 (as was already implicit). Thus, currently amended claims 36, 37 and 44, and dependent claims thereof (claims 38, 53, 56, 58, 60 and 62) are no longer anticipated by Balchuk and removal of the rejection is respectfully requested.

The Examiner has further rejected claim 44 under 35 U.S.C. 102(b) as being anticipated by Sakharov et al. (EP 1136082 A1). Specifically, the Examiner states that claim 44 recites a composition comprising peptides and Sakharov teach peptides VW1 and VW2 which correspond to SEQ ID NOs:2 and 12 of the current invention, and since the sequences were identified from a phage library these peptides were

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together in a composition of matter in the phage library. The Examiner's rejections are respectfully traversed. Claim 44 has been amended herewith. New claim 70 has been added herewith.

Applicants have elected to amend claim 44 in order to expedite prosecution of this case. Thus, currently amended claim 44 does not recite a combination of peptides consisting of SEQ ID NOs:2 and 12, to thereby overcome the Examiner's rejections. Similarly, new claim 70 does not recite a combination of peptides consisting of SEQ ID NOs:2 and 12.

In view of the above claim amendments, arguments and remarks Applicants believe to have overcome the 35 U.S.C. § 102 rejections.

Double patenting

The Examiner has provisionally rejected claims 36-40, 46, 56, 58, 60 and 62 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 4 of co-pending Application. No. 11/411,832. Specifically, the Examiner states that SEQ ID NO:1 of U.S. Appl. No. 11/411,832 includes Arg-Arg which is in SEQ ID NO:10 of the current application and that due to the claim language the current claim encompasses peptides of any portion of SEQ ID NO:10. In addition, the Examiner states that claim 4 of U.S. Pat. Appl. No. 11/411,832 reads on pharmaceutical compositions and although the current claim language is different, the current claim is anticipated by the reference claim. The Examiner's statements are respectfully traversed. Claims 36, 37 and 46 have been amended herewith.

In view of the claim amendments discussed in response to 112 and 102 rejections, Applicants believe that the double patenting rejection is no longer valid and removal of same is respectfully requested.

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In view of the above amendments and remarks it is respectfully submitted that claims 36, 37, 38, 44, 46, 53, 56, 58, 60, 62 and 70 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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Date: November 13, 2007

Enclosures:

- Petition for Extension (One Month)
- Additional Claims Transmittal Fee
- Letter to Chief Draftsman
- Annotated Drawing
- Formal Drawing Transmittal Sheet
- Complete Set of Replacement Drawing Sheets

Title: ANGIOGENIC PEPTIDES AND USES THEREOF

Seq 1: VPWMEPAYQRFL (VL; SEQ ID NO:2)
Seq 2: LLADTTTHRPWT (LT; SEQ ID NO:4)
Seq 3: QPWLEQAYYSTF (QF; SEQ ID NO:6)
Seq 4: SAHGTSTGVPWP (SP; SEQ ID NO:8)
Seq 5: YPHIDSLGHWRR (YR; SEQ ID NO:10)
Seq 6: TLPWLEESYWRP (TR; SEQ ID NO:12)

Figure 22a

Seq 1: VPWMEPAYQRFL (VL; SEQ ID NO:2)
Seq 3: QPWLEQAYYSTF (QF; SEQ ID NO:6)
Seq 5: YPHIDSLGHWRR (YR; SEQ ID NO:10)
Seq 6: TLPWLEESYWRP (TR; SEQ ID NO:12)

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~~pw[11][de].y~~ (SEQ ID NO:27)

Pro Trp Xaa Xaa Xaa Xaa Tyr (SEQ ID NO:32)

Figure 22b

VEGB MOUSE Vascular endothelial growth factor B precursor
PVSQFDGPSHQKKVV **PWIDVY** ARATCQPREVVVPLS (amino acids 22-57 of SEQ ID NO:28)

PWIDVY (SEQ ID NO:31 amino acids 37-42 of
SEQ ID NO:28)

PVSQFDGPSHQKKVVPWIDVYARATCQPREVVVPL Mouse (SEQ ID NO:29)

PVSQ D P HQ+KVV WIDVY RATCQPREVVVPL Alignment of VEGF-B

PVSQPDAPGHQRKVVSWIDVYTRATCQPREVVVPL Human (SEQ ID NO:30)

Seq 1: VPWMEPAYQRFL (SEQ ID NO:2)

Seq 3: QPWLEQAYYSTF (SEQ ID NO:6)

Seq 5: YPHIDSLGHWRR (SEQ ID NO:10)

Seq 6: TLPWLEESYWRP (SEQ ID NO:12)

Figure 22c